CLAIMS:

1. (Currently amended) An apparatus for managing a translation mechanism in a processor architecture comprising:

a pre-load unit that loads translation data into a translation look-aside buffer, for at least one translation of at least one effective address into at least one corresponding real address, prior to execution of an application corresponding to the at least one translation

an execution unit for generating an effective address;

a translator coupled to the execution unit, wherein the translator ~~at least~~ translates [[an]] the effective address into a real address utilizing the translation look-aside buffer; ~~wherein if a translation is at least not available, then the real address is unavailable~~;

~~a miss manager, wherein the miss manager is at least configured to manage unavailable real addresses from the means for translating;~~

~~means for pre-loading translation data~~; and

a storage ~~means~~ device, wherein the storage ~~mean~~ device ~~at least~~ stores ~~a plurality of~~ general data, and wherein the ~~plurality of~~ general data is ~~at least~~ referenced by the real ~~addresses~~ address.

2. (Currently amended) The apparatus of Claim 1, wherein the storage ~~means~~ device further comprises a page table, and wherein the page table is configured to ~~at least~~ provide a ~~plurality of references~~ reference to the ~~plurality of~~ general data.

3. (Currently amended) The apparatus of Claim 2, wherein the ~~means for pre-loading~~ pre-load unit further comprises a communication channel between the page table and the translator.

4. (Currently amended) The apparatus of Claim [[3]] 1, wherein the translation mechanism further comprises a management device, provided as one of a software manager or a hardware manager, coupled to the translator.

5. (Currently amended) The apparatus of Claim 4, wherein the ~~software manager~~ management device further comprises:

a data port for transporting data ~~there~~ between the pre-load unit and the translation look-aside buffer; and

an index table for supplying index data to the translator~~; and~~

~~means for providing management management of the means for pre-loading,~~ wherein the software manager manages the pre-load unit.

6-11. (Canceled)

12. (Currently amended) A method for managing a translation mechanism in a processor architecture comprising:

pre-loading translation data into a translation look-aside buffer, for at least one translation of at least one effective address to at least one corresponding real address, prior to execution of an application corresponding to the at least one translation;

generating an effective address;

translating [[an]] the effective address into a real address utilizing the translation look-aside buffer~~; wherein if a translation is at least not available, then the real address is unavailable~~;

~~managing unavailable real addresses from the step of translating;~~

~~pre-loading unavailable data~~; and

accessing ~~a plurality of~~ stored general data ~~wherein the plurality of stored general data is at least referenced by~~ in a storage device based on the real ~~addresses~~ address.

13. (Currently amended) The method of Claim 12, wherein the step of accessing further comprises accessing a page table, and wherein the page table is configured to ~~at least~~ provide a ~~plurality of references~~ reference to the ~~plurality of~~ general data.

14. (Currently amended) The method of Claim 13, wherein the step of pre-loading further comprises utilizing a communication channel between the ~~reference~~ page table and a translator.

15. (Currently amended) The method of Claim [[14]] 12, wherein step of ~~translation~~ translating further comprises ~~at least~~ utilizing a management device, provided as one of a software manager or a hardware manager, coupled to the translator.

16. (Currently amended) The method of Claim 15, wherein the step of ~~at least~~ utilizing the ~~software manager~~ management device further comprises:

transporting data through a data port between a pre-load unit, that performs the pre-loading of translation data, and the translation look-aside buffer; and

supplying index data from an index table to the translator~~; and providing management of the means for pre-loading~~, wherein the management device manages the pre-load unit.

17-24. (Canceled)

25. (New) The apparatus of Claim 1, wherein the pre-load unit loads a plurality of translations into the translation look-aside buffer based on a page table associated with the storage device prior to execution of the application.

26. (New) The apparatus of Claim 25, wherein the plurality of translations are identified in the page table based on an effective start address and a region size parameter, and wherein the plurality of translations comprise all of the translations starting at the effective start address in the page table and ending at an effective address corresponding to the effective start address plus the region size parameter.

27. (New) The apparatus of Claim 25, wherein the plurality of translations are identified in the page table using a memory advise operating system call.

28. (New) The apparatus of Claim 25, wherein the pre-load unit stores a state of the translation look-aside buffer in response to a swap of tasks, from a first task to a second task, running on the execution unit.

29. (New) The apparatus of Claim 28, wherein the pre-load unit restores a state of the translation look-aside buffer in response to a swap of tasks, from the second task to the first task, running on the execution unit.

30. (New) The method of Claim 12, wherein pre-loading comprises loading a plurality of translations into the translation look-aside buffer based on a page table associated with the storage device prior to execution of the application.

31. (New) The method of Claim 30, wherein the plurality of translations are identified in the page table based on an effective start address and a region size parameter, and wherein the plurality of translations comprise all of the translations starting at the effective start address in the page table and ending at an effective address corresponding to the effective start address plus the region size parameter.

32. (New) The method of Claim 30, wherein the plurality of translations are identified in the page table using a memory advise operating system call.

33. (New) The method of claim 30, further comprising storing a state of the translation look-aside buffer in response to a swap of tasks, from a first task to a second task, running on the execution unit.

34. (New) The method of claim 33, further comprising restoring a state of the translation look-aside buffer in response to a swap of tasks, from the second task to the first task, running on the execution unit.

35. (New) A computer program product in a computer usable medium, wherein the computer program product comprises a computer readable program that, when executed by a computing device, causes the computing device to:

pre-load translation data into a translation look-aside buffer, for at least one translation of at least one effective address to at least one corresponding real address, prior to execution of an application corresponding to the at least one translation;

generating an effective address;

translating the effective address into a real address utilizing the translation look-aside buffer; and

accessing stored general data in a storage device based on the real address.

36. (New) The computer program product of Claim 35, wherein the computer readable program accesses stored general data by accessing a page table, and wherein the page table is configured to provide a reference to the general data.

37. (New) The computer program product of Claim 35, wherein the computer readable program pre-loads translation data by utilizing a communication channel between the page table and a translator.

38. (New) The computer program product of Claim 35, wherein the computer readable program translates the effective address into a real address by utilizing a management device, provided as one of a software manager or a hardware manager, coupled to the translator.

39. (New) The computer program product of Claim 38, wherein the computer readable program utilizes the management device by:

transporting data through a data port between the pre-load unit and the translation look-aside buffer; and

supplying index data from an index table to the translator, wherein the management device manages the pre-load unit.